

## REMARKS/ARGUMENTS

This application has been carefully considered in light of the final office action mailed April 10, 2007..

Claims 1, 2 and 21 have been rejected under 35 U.S.C. 103(a) as being obvious over the primary reference to Toda, Japanese Patent JP07-172317A when considered in view of the teachings of US Patent 4,043,285 to Nordstrom. Claims 3, 4, 9 and 22 have been rejected under 35 U.S.C. 103(a) as being obvious over the primary two references when further considered in view of the teachings US Patent 3,252,603 to Davis. Claim 7 has been rejected over the two primary references when considered in view of the teaching of US Patent 6,161,887.

Claim 12 has been rejected under 35 U.S.C. 103(a) as being obvious over the two primary references when further considered in view of the teachings of US Patent 6,220,173 to Sauerwein. For the reasons discussed below, reconsideration of the art rejections of this claim is respectfully requested.

Claims 18, 19 and 23 have been rejected for obviousness over the references cited against claim 7 as well as the additional structure disclosed in US Patent 5,915,906 to Lucking. Claim 24

has been rejected over US Patent 4,973,219 to Brickner et al when considered in view of the teachings of US Patent 4,158,416 to Podesta.

The Examiner has indicated that claims 5, 6, 8, 10, 11, 13 and 20 are objected to as being dependent upon a rejected base claim but would be allowed if written in independent format to include the subject matter of the base claim and any intervening claims.

The primary reference to Toda has been considered but is not believed to be sufficiently similar in structure to the material handling system of the present invention or capable of functioning in the manner of the present invention such that the reference does not provide a sufficient nexus to form a combination rejection for obviousness when considered with the secondary references.

Toda discloses a material handling system that includes a grid track system having parallel sets of transverse track sections 2,3 and 4,5 on which a ring rail 7 is movably mounted by four carriage assemblies 14. Movably mounted to the ring rail 7 is a single hoist rail 9 along which a hoist 10 is movably mounted. The primary similarity between the system of Toda and

that of the present invention is that Toda includes a hoist device 10 carried by a transfer unit that is movable along and X-Y grid. However, the mechanics and functional characteristics of Toda are significantly different than those of the present invention.

At page 4 of the final office action, the Examiner has noted that Toda does not disclose a structure having a plurality of vertical cells wherein each cell includes a plurality of tier levels of a size to receive a storage and shipping container, does not disclose a spreader beam nor a guide member between a transfer unit and the spreader beam to stabilize a container being elevated relative to the transfer unit. In this respect, the Examiner states that it would be obvious to modify Toda to include a plurality of transfer units, columns and tiers, as per the teachings of Nordstrom, to improve the center of gravity of a loaded ship. The reason for making the combination in order to improve a center of gravity of a loaded ship teaches away from the suggested combination as there is nothing in Toda that requires improving a center of gravity of a ship or any other structure.

In order to reject a claim over a combination of references, there must be something in the references themselves that suggest

the combination. It is respectfully submitted that there is not anything in Nordstrom that would suggest to one of ordinary skill in the art that Toda should include vertically tiered storage cells, the use of a spreader beam or the need to provide a guide member between a transfer unit and a spreader beam in order to control a container being moved vertically relative to the transfer unit.

The system of Nordstrom includes on board traveling bridge cranes 82 that are movable along tracks 80 that only extend longitudinally of a ship. There is no X-Y grid rail system on the ship that permits a transfer unit to selectively move in a X-Y plane over a plurality of tiered storage cells as is taught by the present invention and as claimed in claim 1. The operating structure of Toda does not require any organized storage cells nor any bridge crane like structure. Toda teaches the use of a single hoist 10 that is movable along a rail 9 carried by a ring rail 7 that can be moved in an X-Y plane to lift objects within any area defined by the X-Y plane. Nothing in Toda suggests a need or desire for controlling the movement of a load while being elevated or providing for orderly movement of storage containers to or from storage cells. In view of the foregoing, reconsideration and withdrawal of the rejection of claims 1, 2 and 21 is respectfully requested.

The reference to Davis has been considered however, it is respectfully submitted that even if one were to provide the structure of Toda with gear and rack mechanisms, the remaining differences between the combination of Toda and Nordstrom as set forth above would still exist and thus the combination would not teach the invention of claim 1 or claims 3, 4 and 22 that depend therefrom. Further, claim 3 recites first means for selectively engaging and disengaging the at least one first drive gear with the rack members and such feature is not taught in Davis. Claim 4 further recites second means for selectively engaging and disengaging at least one second drive gear with the rack members which structure is also not disclosed in Davis. Claim 22 recites first and second drive motors which is also not disclosed in Davis. In view of the foregoing, reconsideration of the rejection of claims 3, 4 and 22 over the combination suggested is respectfully requested.

The reference to Shiota et al has been cited as showing a fixed probe and a telescoping probe, however, it is respectfully submitted that one of ordinary skill in the art would not modify the Toda hoist structure to include such mechanism as disclosed in Shiota et al. Shiota et al discloses swing suppressors 17 that are hydraulic cylinders having extension rods 20. The ends of the extension rods are secured to brackets of a flipper beam.

The rods are thus not separate probes. Further, the Examiner has not addressed how swing suppressors 17 of Shiota et al would be adapted to be used with the Toda structure. There is nothing in Toda that suggests that swing suppression is necessary for the hoist 10 and there is no structure in Toda similar to a spreader beam that could be modified to associate the hydraulic swing suppressors therewith. In view of the foregoing, withdrawal of the rejection of claim 7 is also requested.

The reference to Sauerwein has been cited as disclosing an inductive power raceway adjacent to a grid track system. The inductive power raceway is provided to create attraction of one of two arms of a rocker 13. Wheels 17 and 18 are moved either in toward or away from the grid tracks to steer a trolley either left or right. The use of an inductive power raceway for controlling the steering of a trolley would not be an obvious combination with the references to Toda and Nordstrom. In the present invention, an inductive power system is used for supplying power to the drive means for the at least one transfer unit and no similar use is being made of the power raceway of Sauerwein. Also, due to the pivoting intersections 13 of Toda, it is not clear how a power raceway would be configured with the other elements of the grid tracks of Toda. In view of the foregoing, reconsideration of this grounds for rejection is also

respectfully requested.

For the same reasons as set forth above, reconsideration of the rejection of claims 18, 19 and 23 is requested. The additional reference to Lucking does not overcome the differences between the prior art combination of Toda, Nordstrom and Shiota et al and the present invention as discussed above.

The references to Brickner and Podesta have also been considered as they have been applied against claim 24 and it is respectfully submitted that they do not teach or suggest the invention set forth in claim 24. More specifically, in Brickner, the shuttle is not designed to permit X-Y motion in a plane and the track system does not appear to have first and second tracks that transversely intersect with one another. Rather, the track system is formed of loops with switching mechanisms provided between the loops as described at column 7 beginning at line 38 of the reference. Further, as set forth at column 9, beginning at line 39 of Brickner, the shuttles are moved along monorails using four sets of wheels. Because the rail or track system of Brickner is a monorail system, the shuttles are not supported by spaced first and second tracks as claimed in claim 24 and the shuttles can not move in an X-Y plane as is possible with the transfer units of the present invention.

In view of the foregoing, even if one were to combine the teachings of Podesta with the structure of Brickner, the resultant system would not have the elements nor the operative functionality that is possible with the system defined by claim 24. Therefore, reconsideration of this rejection is also requested.

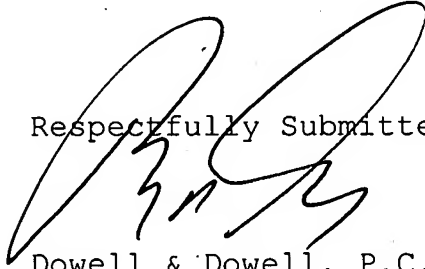
Thus, the cited art does not teach or disclose the structure and operable characteristics of the present invention nor provide for the operable and structural advantages as discussed in the present application. The present invention provides an overhead system that does not require rotatable track members at the intersections as the intersections are open. Further, one or more transfer vehicles may operate at the same time using the system of the present invention and can operate above any of the storage tiers defined by the cells of the present invention while moving in X-Y planes. Additionally the present invention also provides guidance features for controlling the movement of the spreader beams and any containers carried thereby whenever the containers are elevated relative to the storage cells.

Therefore, favorable consideration and allowance of the amended claims is respectfully solicited. Should the Examiner have any questions regarding this matter or the allowability of



the application, it would be appreciated if the Examiner would contact the undersigned attorney-of-record for purposes of scheduling a personal interview in order to expedite the further prosecution of this application.

Respectfully Submitted,

A handwritten signature in black ink, appearing to be 'R. A. Dowell', written over the text 'Respectfully Submitted,'.

Dowell & Dowell, P.C.

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